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AUTHOR Kifer, Edw[illegible]
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ABSTRACT

This paper discusses the influence of home and school environments on learning in children. Studies are cited which support the hypothesis that the home environment is the major predictor of school achievement. These studies deal with "status" variables such as father's occupation and education, mother's education, and social and economic status of the family. "Status" variables are contrasted with "process" variables, which indicate what parents do to encourage or support (directly or indirectly) the educational achievements and related attitudes of their children. Process variables in both home and school are of interest because they provide clues to structuring optimal learning environments. Research indicates a correlation between certain (process variables) in the home environment and school achievement. These process variables can be seen as facets of three main conceptual dimensions of the home environment: (1) the verbal dimension, (2) activities congruent with the expectations and demands of school, and (3) the general cultural level of the home. Variables found in research to be important to the school environment are teacher competence, classroom teaching procedures, and the ability to elicit student motivation. It is suggested that in addition to considering process variables and what it is these process variables change, researchers should also look at the climate surrounding parent-child and teacher-student interactions. (SB)

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THE RELATIONSHIP BETWEEN THE HOME AND SCHOOL IN INFLUENCING THE LEARNING OF CHILDREN

Edward Kifer
University of Kentucky

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A recent book (White, 1975) that focuses on the educational growth of children during the first three years of life states:

> In our studies we were not only impressed by what some children could achieve during the first years, but also by the fact that the child's family seemed so obviously central to the outcome....The informal education that families provide for their children makes more of an impact on a child's educational development than the formal educational system [author's parentheses]. If the family does its job well, the professional can provide effective training. If not, there may be little the professional can do to save the child from mediocrity.

The book is a result of almost two decades of inquiry about the early home environment and its influence on the learning of children. It is written 10 years after the creation of Project Head Start and after evaluations of such massive intervention programs suggest that they have small if any effects on the educational development of children from disadvantaged homes. It is contemporary in that it supports pre-school education for children and the need for enriched home environments for infants. It is adamant in its claim for the primacy of the early home environment in the educational development of the young.

The differences are striking when one juxtaposes to the above statement generalizations from large scale research studies of the effectiveness of schools. Jencks et. al. (1972) say:

> Overall the evidence shows that differences between high schools contribute almost nothing to the overall level of cognitive inequality...elementary schools may be more important but the evidence...is inconclusive.... Under these circumstances the reader should not be surprised to learn that it is very difficult to identify specific characteristics of schools that influence student achievement...[what follows]...describes our futile attempt to identify resources that make one school more effective than another....

Other large scale investigations of the effectiveness of schooling (Coleman et. al., 1966; Peaker, 1975) arrive at similar conclusions. Each suggests that variation among students in school achievement is more a result of differences in home background than differences among schools.

Together these quotes spell out what might be called the "conventional wisdom" about the topic I am to discuss: The relationship of home and school in influencing the learning of children. We seem to be living in an age of extraordinary claims about the educational effectiveness of competent parents and good homes (as the twig is bent so grows the tree!) and equally remarkable assertions about the lack of effectiveness of competent teachers and good schools (you cannot teach an old dog new tricks?).

Since both the home and the school are settings in which learning occurs, it seems odd that one setting should be considered so effective while the other is considered so ineffective. In fact, what is being suggested, if we push the conventional wisdom to an extreme, is that I can be an amazingly competent educator at home with my children, but as soon as I enter a classroom I am transformed into an incompetent teacher. I have quite a different view of the relative influences of the home and school in facilitating the learning of the young and in the remainder of the paper I shall attempt to marshall evidence for such a view.

STATUS, PROCESS, PRODUCT

Although the results of investigations of the effectiveness of schools (more precisely the lack of effectiveness) seem to complement the conclusions about the immense importance of the home in facilitating learning, there are compelling differences between the points of view from which the conclusions

are drawn. When White speaks of the efficacy of the home, and suggests that fewer than 10 per cent of the families in the United States structure the home optimally, he is emphasizing the impact of the home environment on the growth of children. When Jencks et. al., Coleman et. al., and Peaker discuss "home backgrounds" of students, and infer that home background is the most important predictor of school achievement, they are speaking about variables such as Father's Occupation, Father's Education and Mother's Education, measures which reflect the social and economic "status" of families. Although such status characteristics of the home or family correlate positively with school achievement they are of limited utility in explaining how homes actually operate to provide either effective or ineffective educational settings for children. One can imagine, for example, two homes of the same social class or headed by similarly educated parents which differ substantially in the manner in which parents and children interact in educational and school-related tasks.

Contrasted to status variables are those which can be labelled process variables and are ones that indicate what parents do to encourge and support either directly or indirectly the educational achievements and related attitudes of their children. Process variables in the home (e.g., reading books to young children) are of both practical and educational interest since by indicating what parents do to educate their children they provide clues about how optimal learning environments can be structured. Both the home and the school are interested in creating the best possible environments for learning so a focus on the home environment is useful not only because it indicates how the home can cooperate with the school to increase the probability that children have fruitful school experiences but also because

knowledge about most effective learning environments may be gathered in both settings.

Just as we can distinguish between process and status variables in viewing the home so too they can be distinguished in the school. The studies of the effectiveness of schools typically measure such things as Type of Education received by the teacher, Number of Years Teaching Experience and Amount of Money Per Capita Spent, variables which are hypothesized to produce quantitative differences between schools in achievement. These measures, too, reflect status rather than process. If we are to evaluate the relative influence of the home and school on the educational growth of students, we should focus on what teachers do in the classroom, the process variables, rather than the status assigned to teachers or the school in which they work.

This distinction between process and status variables will be maintained throughout the remainder of the paper. Although the status variables in the home do predict school achievement, they will be ignored because they can provide few clues about how either teachers or parents should interact with children if they are to facilitate growth. The process variables, on the other hand, do provide a basis for action.

Although process and status variables can be distinguished conceptually, the research that used the different types of variables do share a set of concerns. Each point of view attempts to predict the same things - invariably some measure of school achievement or a measure of aptitude for school. That is, the criteria in the studies relating variables in the home to variables in the school are typically scores on standardized achievement tests or scores on tests of "mental ability." Most studies in this field attempt to explain, therefore, a very limited set of products.

Although we are increasingly aware of a great variety of outcomes which are affected by both the home and the school only a small minority of research has attempted to related home and school variables to student outcomes such as creative products, student values, interests or other products of education. Because the domain of products studied is limited, the research also is limited.

PROCESS VARIABLES AND DIMENSIONS OF THE HOME ENVIRONMENT

The search for salient process variables--those which tap the educational dimensions of the home--is similar to a search for an effective treatment in an experimental study. The goal is to identify and measure processes in the home setting which operate effectively across homes to produce educational advantages for children. That search is no easy task. In the first place, the treatment most certainly begins early in the life of the infant, accumulates over time and many facets of it may be very subtle. Second, important process variables may include not only what parents do with children but also how they do it. The climate in which the crucial interaction between child and parent occurs may be just as important as the interaction itself.

Despite such obvious difficulties, researchers have found strong relationships between what parents do and the achievements in school of their children. Dave (1963) measured particular aspects of the home environment and found substantial correlations between those facets and school achievement. Wolf, (1964) measured directly similar facets of the home and found high correlations between the home environment and IQ. Such studies have been replicated a number of times with each replication (e.g., Fitzgerald, 1975) providing support for the initial findings. Studies (Kifer, 1973 and 1975) have shown

also that dimensions of the home environment correlate positively with measures of students' attitudes and expectations.

I prefer to view such educational process variables in the home as facets of three main conceptual dimensions of the home environment. The first main dimension is the verbal dimension. Facets of the verbal environment include such things as bathing the infant in language, reading books to children and encouraging children to express themselves correctly both in speech and writing. Typical findings of how parents and children interact in the home that relate facets of this dimension to abilities or school achievement include Gordon's (1973) that verbal interactions and variety of verbalization correlated highly with scores on an IQ scale and "task-oriented" behavior; Kifer's (1975) that 10 year old's reading for pleasure correlated positively with both parents encouragement to read and school achievement.

An explanation for the power of the verbal environment resides in the notion that success in the typical classroom is, in part, a function of the child's ability to penetrate a verbal curtain which surrounds the instructional process. Those children with verbal facility tend, therefore, to be more successful in academic tasks. The evidence points rather unambigously to the fact that in those homes where precise communication is encouraged and emphasized children develop abilities which give them increased power to comprehend what is expected of them in the classroom setting.

A second dimension of an effective home environment includes activities in the home which are congruent with the expectations and demands of the school. Facets of this dimension include providing a time and place for students to complete homework, working with the student when and if he or

she is faced with a difficult school task, and taking interest in what the child is doing in the school. Dave (1963) described similar facets as indicating a press for achievement and found high correlations between that press and student achievements. Crandall and Battle (1970) found positive correlations between parental behaviors and willingness of students to devote effort to their school studies. It appears that through a range of behaviors, of which the above is just a sample, the child learns not only that what happens in school is important but also is given active support, if needed, so that tasks in the school can be completed successfully. Hence, those students who are fortunate enough to receive support and encouragement in the home for their academic efforts are those who tend to do best in school.

A third dimension of the home environment that has an impact on the child's potential success in school is the general cultural level of the home. Homes which emphasize reading, discussions, attending cultural activities, museums and zoos, provide a milieu in which students develop both competencies and attitudes which increase the probability that as students they will be successful in the school setting. One can conceive of an environmental press within the educating home which encourages and stimulates intellectual and social development and provides simultaneously a set of experiences which gives the child skills, knowledge and attitudes which are prerequisites for success in the school setting. Getzels (1963) developed a model from which to view the potential conflicts for children who come from social organizations (for example, the family) that have one set of value orientations into new organizations (the school) which have a different set of values. Harrison (1971) found evidence to support the notion that different orientations in the home have an impact on both student accomplishments and attitudes. Hess and Shipman (1965)

have shown how mothers from different social classes teach their children differently. A substantial amount of evidence, therefore, has linked the milieu of the home and its manifestations to how well children will fare in the school setting. Where there is congruence between what the home expects and rewards and what the school expects and rewards positive growth develops; incongruence leads to less achievement and less positive personal growth.

It is hard to deny the pervasive influence of the home on how children fare in the school. Those children who emerge from homes which provide rich verbal environments, support and concern for school-related tasks and activities, and milieus where educational experiences are congruent with the expectations of the school are the students who do best in the classroom. Effective homes provide not only experiences which prepare children for schooling, but also support and concern during the schooling process which sustain the student's ability to cope effectively with the demands of the classroom.

Although these previously described dimensions of the effective home environment are important predictors of school achievement and attitudes, the mere existence of such behaviors may not explain why they are so effective in influencing the educational development of students. Coinciding with these behaviors are features of the home as an educational setting which allow it to have its tremendous influence. If we could imagine the optimal home environment as it operates to influence a child, it is clear that it possesses characteristics very different from what is true of the classroom environment. Among those differences is that interactions in the home are between the child and the most important persons in the child's life. The relationship which exists between teacher and learner in the home is intimate and intense. A second feature of those interactions is the fact that they are relatively continuous and concentrated. The

parent as an effective teacher would interact consistently day by day with the child. If one posits an excellent teacher interacting, often and consistently with one student, the effects of that interaction would be expected to be substantial. A third feature of the optimal home environment is that of the duration of the treatment. Children interact with their parents for years (fewer these days than formerly) before they encounter a school setting and throughout the period that the student is attending school. Again the impact of such exposure to an optimal environment ought to be profound.

If we posit that parents vary greatly in their ability to provide an educational environment for children, then it is clear that those children who have been exposed continuously, intensely and for a long time to either effective or ineffective environments are going to vary greatly in skills, knowledge and attitudes brought into and maintained in the school. So such major variations in the home are going to have a substantial impact on what children can and will do in the school.

When students come into the school they will face a very different type of learning environment. No longer will they be the center of one person's attention, no longer will they receive intense individual instruction, no longer will the instruction have the consistency that can be found in the effective home. In the school the student is faced with the prospect of being one in thirty, of having a different teacher each year or each class period and not being exposed to the same kind of instruction from classroom to classroom. In sum the school is a very different type of social organization than is the family.

If we posit the notion that there are good teachers and those who are not so good, then we can see that the impact of such teachers may balance

out. That is, it is unlikely that students will be fortunate enough to have great teachers year in and year out. More likely their experience will be similar to what I consider to be more typical: we consider ourselves lucky to have had a great teacher and can remember well the impact that the great teacher had on us. The impact of effective teachers on the learning of students, therefore, becomes much more difficult to assess than is the impact of the home on children. The effects of a good teacher can be balanced by the lack of effects of the poor teacher. Students are no longer exposed to continually excellent instruction, experiencing the joy of individual tutorials, or exposed for an extended period of time to an optimal learning environment.

But if we assume that there can be good teachers and poor teachers and that they have differential impacts on the development of students, there is little reason to suspect that there can only be good teachers in the home and not in the school. The question is how to assess the impact of effective teaching and good teachers. One way to answer such a question is to find out what happens over a period of time in the school and what are the effects of good teaching.

A LOOK AT THE IMPACT OF SCHOOLING

One way to look at the effects of schooling is to ask what happens given a fixed amount of time in the school. Research related to that question has been conducted by Wiley and Harnischfeger (1974) focussing on a variable they call Exposure to Schooling, by Carroll (1963) on a model of school learning where variables are measured in units of time and by Bloom (1976) who posits a theory of school learning based on the

impact of cumulative experiences in the school.

A most striking demonstration of the effects of teaching and teachers, based on this perspective, is by Carroll (1975). It is from a time or Mastery Learning point of view that a cross-cultural analysis of learning of French as a Foreign Language was completed. Two of the achievement measures used in the survey were French Reading Comprehension and French Listening Ability. Carroll's point of departure was to estimate the amount of instructional time it takes for the average student to attain a very high degree of proficiency (let's call it a mastery level) in French. According to his calculations the average student masters French Reading Comprehension after 6 and 1/2 years of language instruction and masters Listening after 6 and 1/2 years of instruction.

Since there are substantial differences in the rate at which students learn and the amount of time it takes a particular student under particular circumstances to master a language, the strength of teaching or teaching variables can be assessed by relating them to the base or starting point of the total number of years of instruction it takes the average student to master the language. The first variable, teacher competence in French, is an extremely strong one. It is estimated that if the average student were fortunate enough to get extremely competent teachers, rather than an average teacher, where competence is defined as fluency in the French language, the student would reach the mastery level in Listening <u>almost a year</u> more quickly than if the teachers are average. This variable also affects the amount of time it takes to master reading French but to a lesser extent.

A second teacher variable was called "classroom teaching procedures." It is a measure of the extent to which the teaching of French was done in

the French language rather than in the students' native tongue. Those classrooms in which the substantial majority of instructional time is in French (not to the total exclusion of explanations in the native tongue, of course) give students a proportional advantage in achievement. Almost 3/4 of a year of the average 7 and 1/2 years of instruction can be gained in Listening and about 1/2 year of instruction in Reading Comprehension, where the average is 6 and 1/2 years.

A third finding of Carroll's study is also relevant in terms of the effects of good teaching. Student motivation can be operationalized as the amount of time the student is willing to spend learning. The two measures used in this study, aspiration to understand spoken French and aspiration to read French, produced the results one would expect. The motivation to understand spoken French is strongly related to Listening but not to Reading Comprehension. The motivation to read is highly related to Reading Comprehension but not to Listening--evidence which suggests that student motivation, and the ability to exploit such motivation, is a particularly important consideration in teaching. How many of us as teachers ask students what emphasis they expect in a course and for what reason?

Time, of course is not a process variable; it simply sets the frame in which process variables can operate. And although Carroll's variables of Teacher Competence and Classroom Procedures come much closer to measuring what occurs in classrooms than do variables such as Years Teaching Experience, I believe they are most fruitfully viewed as proxies for the process variables that ought to be measured. Yet my goal is not so much to identify the "correct" process variables (I do not know them) as it is to provide evidence that good teachers can influence substantially the growth and

development of students. And the effects of competent teachers of French on the achievements of students, an almost 30% difference in achievement over a span that leads from ignorance in French to fluency in the language, is dramatic evidence. Teachers quite clearly can make a difference!

WHICH ONE, THE HOME OR THE SCHOOL

If we assume, as I do, that both the home and the school are potentially powerful learning environments, it is tempting to ask if as somewhat different learning environments they can be expected to have greater effects on the learning of children in certain areas than in others. There is little direct evidence on such questions. Studies of the effectiveness of schools (Coleman et. al., Jencks et. al., Peaker) have attempted to estimate the proportion of variation in school achievement that can be explained by differences in homes versus differences in schools, ended up haggling about what to do with the variation that is explained by both the school and the home and not attacked questions of whether there are things that can be best done by the home or best done by the school. Studies of the home environment have asked whether those things done in the home are related to school achievement but typically have not asked the question of what differential impact they might have at different levels of schooling or in various subject matter areas.

There may be another reason for the lack of evidence. One wonders if such questions are crucial ones. What we wish for all children is that they have both good teachers and good parents. The best learning for children ought to occur when activities in the home and school are directed to the crucial goals of extending the knowledge and experience of the young. Each

setting has unique opportunities and unique resources.

If we could imagine a school composed of teachers in all areas as competent and effective as Carroll's French teachers, what an exciting and stimulating environment it would be. Not only would students be able to interact with teachers who knew their subject matter but also with those whose experience and insight allowed them to communicate knowledge and skills of their discipline. What home could provide expertise in how scientists ask and answer questions, how mathematicians use and think about numbers, how Mozart and the Beatles express ideas and emotions, how writers articulate the concerns of the day and the concerns of humans? One could continue with the list, of course, but the school and good teachers need not be limited only to such "traditional" matters. Jackson (1973) in what I think is a most insightful critique of Jencks' Inequality paints a picture of a group of inner city children climbing on a bus to go to the country to visit an apple orchard. He speculates on how in the hands of a competent teacher that trip could be a profound learning experience for the young and how a creative teacher could use that experience many times over to further the knowledge and insight of students. The creation and articulation of such activities by competent teachers make the school our best hope for encouraging and developing the talents of the young.

Yet the school cannot reasonably be expected to do all things. The child is born and reared in a home. Crucial interactions occur which affect the educational development of the child. It is in the home that children acquire language, begin to learn about numbers, are encouraged or discouraged in their curiosity and begin to develop social skills which serve to prepare them for schooling. Although parents do not have the collective expertise of

a group of competent teachers, they do have an opportunity to provide personal and concerned attention to the development of their children. They can create a setting where children "learn how to learn," establish a means to support the child in his or her academic endeavors, and provide a source of motivation for the child who must accomplish successfully the tasks required by competent teachers. The evidence cited earlier makes it clear that only an extraordinary child can cope effectively with the demands of schooling without the support and concern of parents.

In the best of all educational worlds (which by no means this one is) the home and the school are not vying to be the major influence on the learning of children. Rather they are two institutions, or better two sets of competent persons, operating simultaneously and cooperatively to influence and direct the growth of children. Educationally a child deserves no less and could hope for no more.

WHERE DO WE GO FROM HERE

In this paper I have attempted to convey a view of how one might look at the relative influences of the home and school on the learning of the young. In doing so I have emphasized the need for viewing such a problem in terms of what processes are involved in the teaching of the young whether that teaching occurs in the home or in the school. There is a danger, however, in emphasizing only what parents or teachers do and not acknowledging that children and students do things, too. Learning on the part of students, though obviously related to teaching, possesses a uniqueness since learners differ individually on what they will do and how they will do it. Statements about the effectiveness of process

variables in the home or process variables in the school invariably must be phrased in terms of "on the average when parents or teachers do such and such it is related to certain learning outcomes." One is reminded of the man who stands with one foot in a bucket of boiling water and one in ice water and announces that on the average he feels fine. Although I believe that the process variables are ones which ultimately will produce powerful explanations of what occurs when someone is being taught and when that same person learns, there is an inherent danger in such an approach if it becomes too limited.

Teaching and learning are interactive processes. One does not only do something to another person but also interacts with that person. One kind of interaction may be beneficial to one student but not so beneficial to another. As parents we interact with our children and the product of that interaction may be different depending on which parent or which child. Educational research which looks at the properties of the interaction among individuals in much less prominent than that which looks at only what the teacher does, for instance. We are much more likely to ask what methods are used, or how are rewards dispensed, or what kinds of questions are asked than to try to find out how a particular method is or is not appropriate for a particular student, or how different students react to various rewards, or if some kinds of questions lead to desired outcomes for one student and not another. An emphasis on the effects of interactions between teacher and student can lead to a broader scope for our inquiry and, hopefully, more knowledge of what occurs in teaching and learning.

If one is to focus on how persons interact, it seems imperative to consider the climate in which the interaction occurs. Research by Bernstein

(1971) suggests an approach to how the climate of the home, for example, can affect language learning. Bernstein posits a type of social control by parents and a parents' willingness to negotiate with children which has effects on the type of language that is acquired. By looking at the climate which surrounds the interactions of parents and children, he has opened an area to investigation which may have important implications for education. Walberg (1974) has advocated the use of classroom climate variables to explain differences in student achievement. He suggests that characteristics of the learning environment as constructed by teachers have important consequences in terms of what and how students learn. Again the climate which surrounds teacher-student interactions is an area which may have potential for explaining under what conditions learning occurs best.

Limiting research to process variables and not considering the interactions among individuals may lead or have lead to an unreasonable search for the stereotypic one best teacher. A more fruitful line of research may posit that since individual learners differ so too do the teachers who will have the greatest influence on a particular individual. Good teachers may come in different sizes and shapes and have different characteristics depending on the characteristics of the students who are being taught. The interactions of students and teachers and what the effective interactions are given the prior experiences of the students and the personal strengths of the teacher is an area of investigation in which there has been little research. Yet it would appear to be a promising line of inquiry.

Finally, one would hope that an emphasis on the process variables would not exclude consideration of what it is that the process variables are changing. As indicated earlier in the paper, studies of the home

environment and of the effectiveness of schools have looked at a very limited set of products. Inevitably the criterion for an effective home or good school has been how much influence it has on the academic achievements of students. Typical criteria are standardized achievement test scores or scores on tests of mental abilities. Some research also includes affective criteria such as attitude toward school, or self-esteem or attitude toward subject matter but the proportion of that research to what is done with test scores as criteria is very small. But one can broaden the criteria even more. For example, there is a considerable amount of interest and research in the area of creativity (Taylor and Getzels, 1975) yet there is little research done which asks whether certain processes in the home that affect how well a student achieves academically also affect the extent to which a student produces divergent responses. Does the home in the process of teaching children to answer questions at the same time teach them not to ask them? When a teacher or parent rewards consistently the person who solves problems is he or she also teaching the person not to find problems? Questions which are related to how various process variables are related to specific outcomes, and the extent to which an emphasis on one type of product precludes the learning of another set of responses seem crucial to an understanding of the teaching-learning process.

It is clear that although we know something about home environments and something about good teachers, there is much more to be known. In any case, I am convinced that both homes and schools do make a difference and wonder why there are others who do not.

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